

Remarks

Entry of the above-noted amendments, reconsideration of the application, and allowance of all claims pending are respectfully requested. These amendments to the claims constitute a bona fide attempt by applicants to advance prosecution of the application and obtain allowance of the claims, and are in no way meant to acquiesce to the substance of the rejections. Support for the amendments can be found throughout the specification (e.g., page 10, lines 11-25; page 12, line 10-16), drawings (e.g., FIGS. 4-5). Claims 1-3 and 5-18 are pending.

Claim Rejection - 35 U.S.C. §102:

Claims 1-5, 8-9, 11-15 and 18 are rejected under 35 U.S.C. §102 as being anticipated by Hale (U.S. Patent No. 5,572,349). This rejection is respectfully traversed.

It is well-settled that there is no anticipation unless (1) all the same elements are (2) found in exactly the same situation and (3) are united in the same way to (4) perform the identical function. Since the applied reference is missing at least one element of each of applicants' independent claims, applicants respectfully submit that the claimed invention is not anticipated by the applied reference, as further discussed below.

For explanatory purposes, applicants discuss herein one or more differences between the applied reference and the claimed invention with reference to one or more parts of the applied reference. This discussion, however, is in no way meant to acquiesce in any characterization that one or more parts of the applied reference correspond to the claimed invention.

Claim 1 is directed to a method for use in a stored program controlled system with a plurality of processing units and a signal generator that interconnects the processing units using time division multiplexing over a free space optical beam line. A common clock signal is generated at a signal generator and distributed over the free space optical beam line to the processing units. A common synchronization signal is generated at the signal generator based on the clock signal and distributed over the free space optical beam line to the processing units. A time slot counter at each processing unit is synchronized to the clock signal and a common synchronization signal.

A message pattern containing a processing unit's address and corresponding time slot map data is generated at the signal generator and distributed over the free space optical beam line to the processing units. Maintained at each processing unit is a time slot map based on the received time slot map data associated with the address of the processing unit. An enable signal is derived from the contents of the time slot map to enable transmission of data onto the beam line. Another enable signal is derived from the contents on the time slot map to enable one or more receivers to extract data from the beam line.

Portions of the rejection of claim 1 in the office action will be discussed and contrasted with the requirements of the claim elements.

With regard to the requirement of claim 1 of generating and distributing a common clock signal over the free space optical beam line to the processing units, column 5, line 17-20 of Hale was cited as teaching this requirement. The cited text of Hale is referring to figure 3 and indicates that a clock input 13 is utilized to synchronize the BTS master units BTS(1) - BTS(n) to a common source. It is important to note that the clock shown in figure 3 and the BTS units are all located in the exchange equipment 1 and the clock signal appears to be applied as a conventional electrical (i.e. not optical) signal. One of ordinary skill in the art would interpret this teaching as utilizing a conventional electronic clock signal to synchronize electronic components located in a single apparatus. The cited text provides no teaching or suggestion of the communication of the clock signal to a remote unit 2 by any method, and certainly does not suggest that the clock is transmitted over an optical beam line to such a remote unit. Therefore, the step of generating and distributing a common clock signal over the free space optical beam line from the signal generator to processing units is not disclosed or rendered obvious by the cited text of Hale. The rejection of claim 1 based on these grounds should be withdrawn.

Claim 1 recites the step of generating at a signal generator a message pattern containing a processing unit address and corresponding time slot map data, and distributing the message pattern over the free space optical beam line to the processing units. Additionally, a time slot map is maintained at each processing unit based on the received time slot map data associated with the address of the processing unit. In the office action the requirement of maintaining time

slot maps was alleged to be taught by the "unique reference pattern" discussed at column 6, line 61-column 7, line 5 of Hale as utilized by decoder 46 in figure 6. This cited text of Hale describes the use of a unique reference pattern to establish a location within the super frame that can be detected so that the positions of the rest of the multiframe can be determined. Thus, the described unique reference pattern will be understood by one of ordinary skill in the art as constituting a synchronization marker that establishes a point of reference in the super frame. This is clearly not equivalent to a time slot map as described in the specification of the subject application, i.e. a time slot map identifies specific time slots for which a processing unit is enabled to transmit or receive. Therefore, the cited text of Hale does not teach the required time slot map of claim 1, and hence the rejection of claim 1 should be withdrawn.

Claims that depend on claim 1 provide additional limitations of patentable significance when considered as a whole in combination with the parent claim.

Independent apparatus claim 12 was also rejected under 35 U.S.C. 102 as being anticipated by Hale for the same reasons applied to claim 1. Claim 12 is believed to be allowable for similar reasons as explained above with regard to claim 1.

Claims that depend on claim 12 provide further additional limitations that are believed to provide additional patentable significance when considered as a whole with claim 12.

Claim Rejections - 35 U.S.C. §103

MPEP §706.02(j) states: "To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)."

MPEP §2143.01 states: "Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved, as a whole would have suggested to those of ordinary skill in the art. In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992)."

The Examiner rejected claim 10 under 35 U.S.C. 103 as being obvious based on Hale in view of Zikan (U.S. Patent 6,310,881). The Zikan reference was cited merely to supply a teaching relating to dynamic data flow control. It will be apparent that the combination of this reference with Hale does not render the subject matter of claim 10 obvious since Hale fails to provide the necessary teachings as discussed above. Therefore, the rejection of claim 10 should be withdrawn.

In view of the above amendments and remarks, allowance of all claims pending is respectfully requested. If a telephone conference would be of assistance in advancing the prosecution of this application, the Examiner is invited to call applicants' attorney.

Respectfully submitted,



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